LDWSF
12.3.4112.1
7-25-03

The RETEC Group, Inc.
1011 S.W. Klickitat Way, Suite 207
Seattle, WA 98134-1162

RETEC

(206) 624-9349 Phone
(206) 624-2839 Fax
www.retec.com

July 25, 2003

Tara Davis
Department of Ecology Toxics Cleanup Program
Underground Storage Tanks
P.O. Box 47600
Olympia, Washington 98504-7600

RE: Ecology UST Site 5585

Dear Ms. Davis:

Enclosed please find one original *Underground Storage Tank Site Checklist/Site Assessment Checklist* for Ecology UST Site 5585. Also attached is one copy of the site assessment report provided to Long Painting.

Sincerely,

The RETEC Group, Inc.

Allison J. Crowley

Allison J. Crowley P.E.
Environmental Engineer

Attachment

cc: Mike Cassidy – Long Painting Company
Brian Vance – Long Painting Company
John Bails, Dan Cargill – Ecology NW Regional Office
Anne Long – Tytanic LLC (letter only)
M. Noll – RETEC
RETEC File No. LPC01-16610

The RETEC Group, Inc.
1011 S.W. Klickitat Way, Suite 207
Seattle, WA 98134-1162

RETEC

(206) 624-9349 Phone
(206) 624-2839 Fax
www.retec.com

July 25, 2003

Mr. Mike Cassidy
Long Painting Company
3101 Cedar Street
Kent, Washington 98201

RE: Compliance Sampling Results – 10,000-gallon Diesel & Gasoline UST Removals
Long Painting Company
1022 South Elmgrove Street, Seattle, WA 98108
Ecology UST Site 5585

Dear Mike:

The RETEC Group, Inc., is pleased to present the results of supervision and compliance sampling work conducted in June 2003 during the removal of one 10,000-gallon diesel underground storage tank (UST) and one 10,000-gallon unleaded gasoline UST at the above-referenced site (Figure 1).

The compliance sampling work was conducted in accordance with our proposal to you, dated March 28, 2003. The supervision and compliance sampling work consisted of: inspecting the removed diesel and gasoline tanks; collecting soil and water samples from the excavation and associated soil stockpile for analysis; and reviewing the laboratory analytical results. Analytical results are summarized in Table 1. Site features and sample locations are shown on Figure 2. Photographs of the tanks and tank removal excavation are included in Attachment 1. A copy of the Site Check/Site Assessment Checklist is included in Attachment 2. Copies of the laboratory analytical reports are included in Attachment 3.

Background

The site is located in the northwest quarter of the northeast quarter of Section 32, Township 24 North, Range 4 East. The property is a vacant vehicle maintenance and warehouse facility located in south Seattle, King County, Washington. Site structures include a vacant truck repair building and three storage buildings (Figure 2). Surrounding parcels are mainly commercial and industrial, with some residential buildings. The site is bordered by South Elmgrove Street to the south, a King County park (Duwamish River Park) to the west, the Duwamish Waterway to the north, and 12th Avenue South to the east. A former Long Painting Company office and sand blasting/painting facility (8025 – 10th Avenue South, the UST registration address, currently vacant) is located west and southwest of the site, east of Duwamish River Park and 10th Avenue South.

The two USTs that were removed in June 2003 were installed at the site in November 1998, and replaced two single-walled steel USTs that were removed from approximately the same location. The older USTs were in service from approximately August 1978 until November 1998.

In 1997 a Phase I and Phase II investigation was conducted by AGRA. This investigation was conducted in conjunction with the transfer of company ownership. Soil and groundwater samples were collected and analyzed for Total Petroleum Hydrocarbons (TPH) as gasoline (TPH-G); TPH as diesel (TPH-D); TPH as oil (TPH-O); and benzene, toluene, ethylbenzene, and total xylenes (BTEX). No compounds were detected above method detection limits. Several groundwater monitoring wells were installed during this work and, with the exception of one well, all wells are still located on or near the site.

In 2000-2002, site assessment, soil removal, and groundwater monitoring work was conducted by Kleinfelder. This work was conducted in response to an historic diesel spill and was not associated with the USTs. Documents related to the previous UST removal were provided to Ecology during this investigation. A No Further Action (NFA) status was recently granted for the soil and groundwater associated with this work by the Department of Ecology (Ecology).

Sampling Results

The diesel and gasoline USTs were located in a common tank basin at the southwest corner of the site, just north of South Elmgrove Street (Figure 2). Both USTs were constructed of steel with a fiberglass protective coating. The tanks were oriented east to west, with the unleaded gasoline UST to the north and the diesel UST to the south. Two fuel dispensers and associated double-walled fiberglass product piping were located directly above the USTs. Fill pipes were located at the east ends of the tanks. Two inch diameter fiberglass product lines also ran from the middle of the tanks to the dispensers located directly above the USTs.

The diesel and gasoline USTs were removed from the excavation on June 24, 2003. The tank removal contractor was Saybr Contractors, Inc., of Puyallup, Washington, the same contractor that installed the USTs in November 1998. A RETEC geologist, registered with the Washington State Department of Ecology (Ecology) to perform Environmental Site Assessments associated with UST systems, was onsite to inspect the condition of the tanks and collect soil and groundwater samples from the limits of the excavation.

The area around the tank locations was excavated to approximately 12 feet below ground surface (bgs). Fill material surrounding the USTs consisted of gray to brown pea gravel mixed with fine sand. Native soils exposed in the UST excavation sidewalls and bottom consisted of brown and some reddish brown to olive gray silty sand from near the surface to approximately 11 feet bgs, underlain by dark brown silty sand. Water was observed in the bottom of the excavation on June 24, 2003.

The USTs (dimensions - 28 feet long; 8 feet in diameter) were removed from the excavation and inspected for holes or corrosion. Both USTs were in excellent condition, with a continuous protective coating, and no signs of holes or corrosion. Additionally no product staining or petroleum-like odor was noted in the fill material or native sand around the tanks.

A total of 12 soil samples and one water sample were collected from the following locations:

A total of 12 soil samples and one water sample were collected from the following locations:

- Four soil samples (NTANKBOT-12, NTANKBOT2-12, STANKBOT-12, and STANKBOT2-12) were collected from the base of the excavation at 12 feet bgs;
- Two soil samples were collected from the north excavation sidewall at 10 feet bgs (NWALL-10 and NWALL2-10)
- One soil sample was collected from the east excavation sidewall at 10 feet bgs (EWALL-10);
- One soil sample was collected from the west excavation sidewall at 9 feet bgs (WWALL-9);
- One soil sample was collected from the south excavation sidewall at 11 feet bgs (SWALL-11);
- Three soil samples (SS-1 through SS-3) were collected from the soil stockpiles; and
- One water sample (EXCAVWATER-13) was collected from the bottom of the excavation using a clean disposable PVC bailer. The sample was dark brown and muddy.

All soil samples were field screened for volatile hydrocarbons using a portable photoionization detector (PID) calibrated to 100 parts per million (ppm) isobutylene. All soil sample PID readings were 0 ppm.

Soil and water samples were placed in clean glass containers and submitted to Analytical Resources Incorporated (ARI) in Tukwila, Washington, for testing. ARI was instructed by RETEC to composite the following samples:

- NTANKBOT-12 and NTANKBOT2-12 were composited into one soil sample NTANKBOT-1,2 for analysis;
- STANKBOT-12 and STANKBOT2-12 were composited into one soil sample STANKBOT-1,2-12 for analysis; and
- SS-1, SS-2, and SS-3 were composited into one soil sample (SS-1,2,3) for analysis.

Soil samples STANKBOT-1,2-12 and SWALL-11 were analyzed for Total Petroleum Hydrocarbons (TPH) as diesel (TPH-D) and TPH as oil (TPH-O) by Northwest Method NWTPH-Dx. Soil samples NTANKBOT-1,2 NWALL-10, and NWALL2-10 were analyzed for TPH-G by Method NWTPH-Gx and BTEX by EPA Method 8021B.

All remaining soil samples and the groundwater sample were analyzed for TPH-G by Northwest Method NWTPH-Gx, TPH-D and TPH-O by Northwest Method NWTPH-Dx, and BTEX by U. S. Environmental Protection Agency (EPA) Method 8021B.

The groundwater sample (EXCAVWATER-13) was also analyzed for methyl tert butyl ether (MtBE) by EPA Method 8021B, and total lead by EPA Method 6010.

All soil sample results were below the applicable Model Toxics Control Act (MTCA) Method A cleanup levels. Soil sample WWALL-9 contained 0.067 ppm toluene and 0.1 ppm total xylenes. Soil stockpile sample SS-1,2,3 contained TPH-D (5.4 ppm) and TPH-O (15 ppm). All other soil sample results were below the laboratory method reporting limits. The excavation water sample (EXCAVWATER-13) exceeded MTCA Method A cleanup levels for TPH-G (7,000 part per billion [ppb]), benzene (370 ppb), MtBE (59 ppb), and total lead (5,500 ppb). All sample results are summarized in Table 1.

Conclusions

Tank removal activities for one 10,000-gallon diesel UST and one 10,000-gallon unleaded gasoline UST, associated dispensers, and product piping at a vacant Long Painting Company sandblasting and painting facility in Seattle, Washington, were completed in June 2003. The tanks were in excellent condition, with no sign of holes or corrosion. Four soil samples were collected from the base of the excavation at 12 feet bgs, five soil samples were collected from the excavation sidewalls at 9 to 11 feet bgs, and three samples were collected from the soil stockpiles. One water sample was also collected from the bottom of the excavation at 13 feet bgs.

Samples were analyzed for TPH-G, TPH-D, TPH-O, BTEX, MtBE, and total lead as described above. All soil sample analytical results were either below the laboratory method reporting limits or below MTCA Method A cleanup levels. The water sample exceeded MTCA Method A cleanup levels for TPH-G, benzene, MtBE, and total lead. All other excavation water sample analytical results were either below the laboratory method reporting limits or below MTCA Method A cleanup levels.

Fill material removed from the UST excavation was re-used as backfill, along with clean imported fill. Based on the analytical results for samples collected at the limits of the UST excavation, site soil meets MTCA Method A cleanup standards. The water sample collected from the base of the excavation showed gasoline impacts exceeding MTCA Method A cleanup levels. However, this sample likely does not represent true groundwater aquifer conditions, and additional testing should be performed to verify whether groundwater at the former USTs area meets MTCA Method A conditions.

Statement of Limitations

This report has been prepared for the sole use of Long Painting Company for the above-referenced address. This report is not intended for use by others, and the information contained herein is not applicable to other sites. The interpretation of subsurface conditions at this site is based solely on information made available to RETEC and observations made possible at the site. It is always possible that areas with hydrocarbons or other compounds may exist in portions of the site that were not assessed. Within the limitations of scope, schedule, and budget, our services have been executed in accordance with generally accepted practices in this area at the time this report was prepared. No other conditions, expressed or implied, should be understood.

Please call if you have any questions regarding this report.

Sincerely,

The RETEC Group, Inc.

Allison J Crowley

FOR Michael D. Noll, L.H.G.
Project Geologist

Attachments

cc: Tara Davis – Department of Ecology UST Group
John Bails, Dan Cargill – NW Regional Office – Department of Ecology
Brian Vance – Long Painting
A. Crowley – RETEC
RETEC File No. LPC01-16610

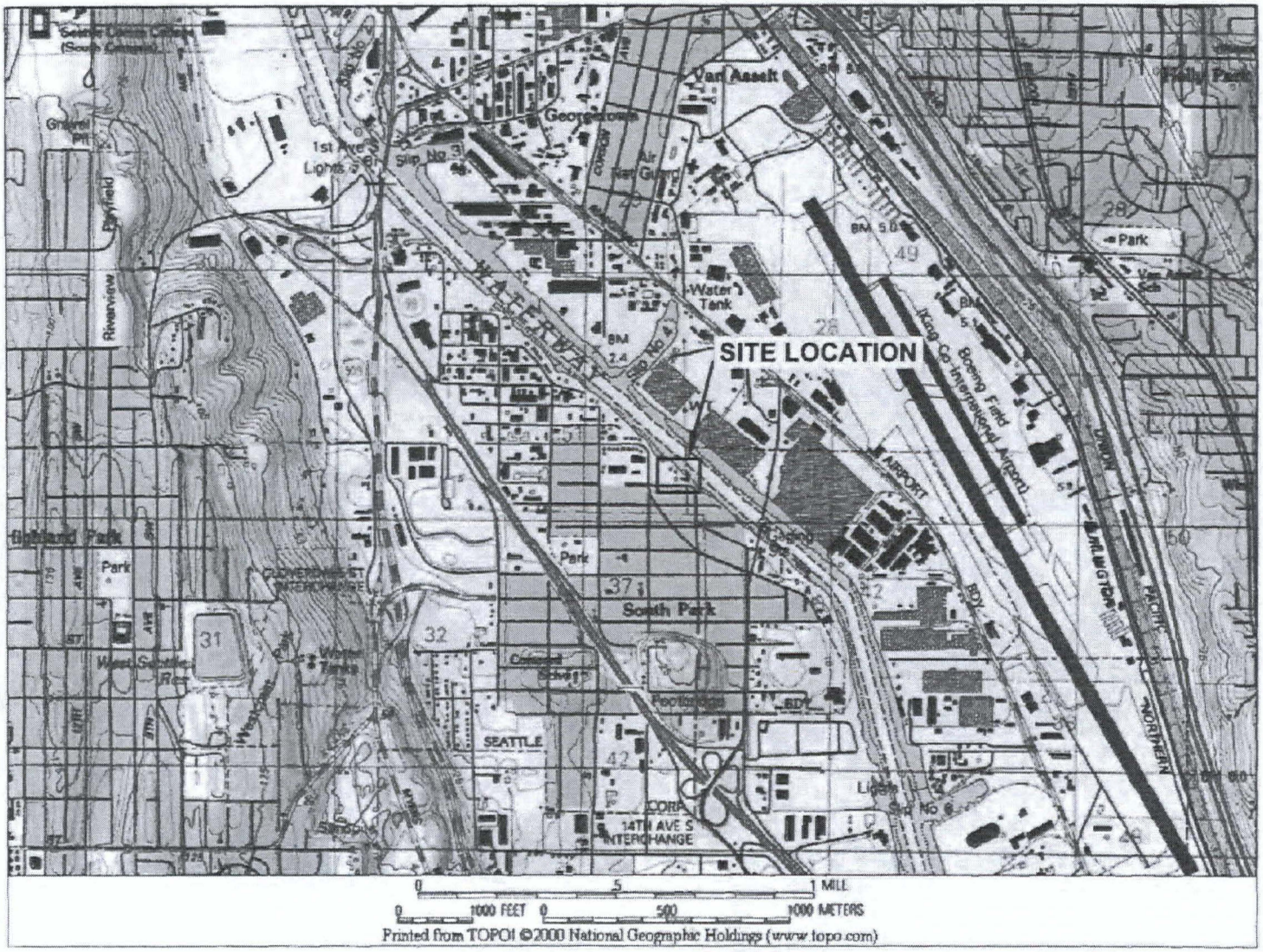
Table 1: Soil and Water Laboratory Analytical Results
Long Painting Company USTs
1022 South Elmgrove Street, Seattle, WA 98108

Sample ID	Sample Location	Sample Date	Sample Depth (ft)	TPH-G	TPH-D	TPH-O	Benzene	Toluene	Ethyl-Benzene	Total Xylenes	MtBE	Total Lead
UST Excavation Soil Samples (ppm)												
WWALL-9	W. UST Excav. Sidewall	6/24/2003	9	ND	ND	ND	ND	0.067	ND	0.1	--	--
NWALL-10	N. UST Excav. Sidewall	6/24/2003	10	ND	--	--	ND	ND	ND	ND	--	--
EWALL-10	E. UST Excav. Sidewall	6/24/2003	10	ND	ND	ND	ND	ND	ND	ND	--	--
NWALL2-10	N. UST Excav. Sidewall	6/24/2003	10	ND	--	--	ND	ND	ND	ND	--	--
NTANKBOT-1,2	N. UST Excav. Bottom	6/24/2003	12	ND	--	--	ND	ND	ND	ND	--	--
SWALL-11	S. UST Excav. Sidewall	6/24/2003	11	--	ND	ND	--	--	--	--	--	--
STANKBOT 1,2-12	S. UST Excav. Bottom	6/24/2003	12	--	ND	ND	--	--	--	--	--	--
Soil Stockpile Samples (ppm)												
SS-1,2,3	UST Soil Stockpiles	6/24/2003	--	ND	5.4	15	ND	ND	ND	ND	--	--
MTCA Method A Cleanup Levels for Soil				30	2000	2000	0.1	7	6	9	--	250
Excavation Water Grab Sample (ppb)												
EXCAVWATER-13	Base of UST Excav.	6/24/2003	13	**7,000**	380	ND	**370**	770	77	390	**59**	**5,500**
MTCA Method A Cleanup Levels for Groundwater				800	500	500	5	1,000	700	1,000	20	5

-- = Not Applicable
ND = Not Detected
ppm = parts per million
ppb = parts per billion
MTCA = Model Toxics Control Act
Bold = Concentration exceeded the MTCA Method A cleanup level
TPH-G = Total Petroleum Hydrocarbons as Gasoline by Northwest Method NWTPH-Gx.
TPH-D = Total Petroleum Hydrocarbons as Diesel by Northwest Method NWTPH-Dx.
TPH-O = Total Petroleum Hydrocarbons as Oil by Northwest Method NWTPH-Dx.
MtBE = Methyl tert Butyl Ether by EPA Method 8021B.
BTEX = Benzene, toluene, ethylbenzene, and total xylenes by EPA Method 8021B.
Total Lead by EPA Method 6010B.

7/23/2003

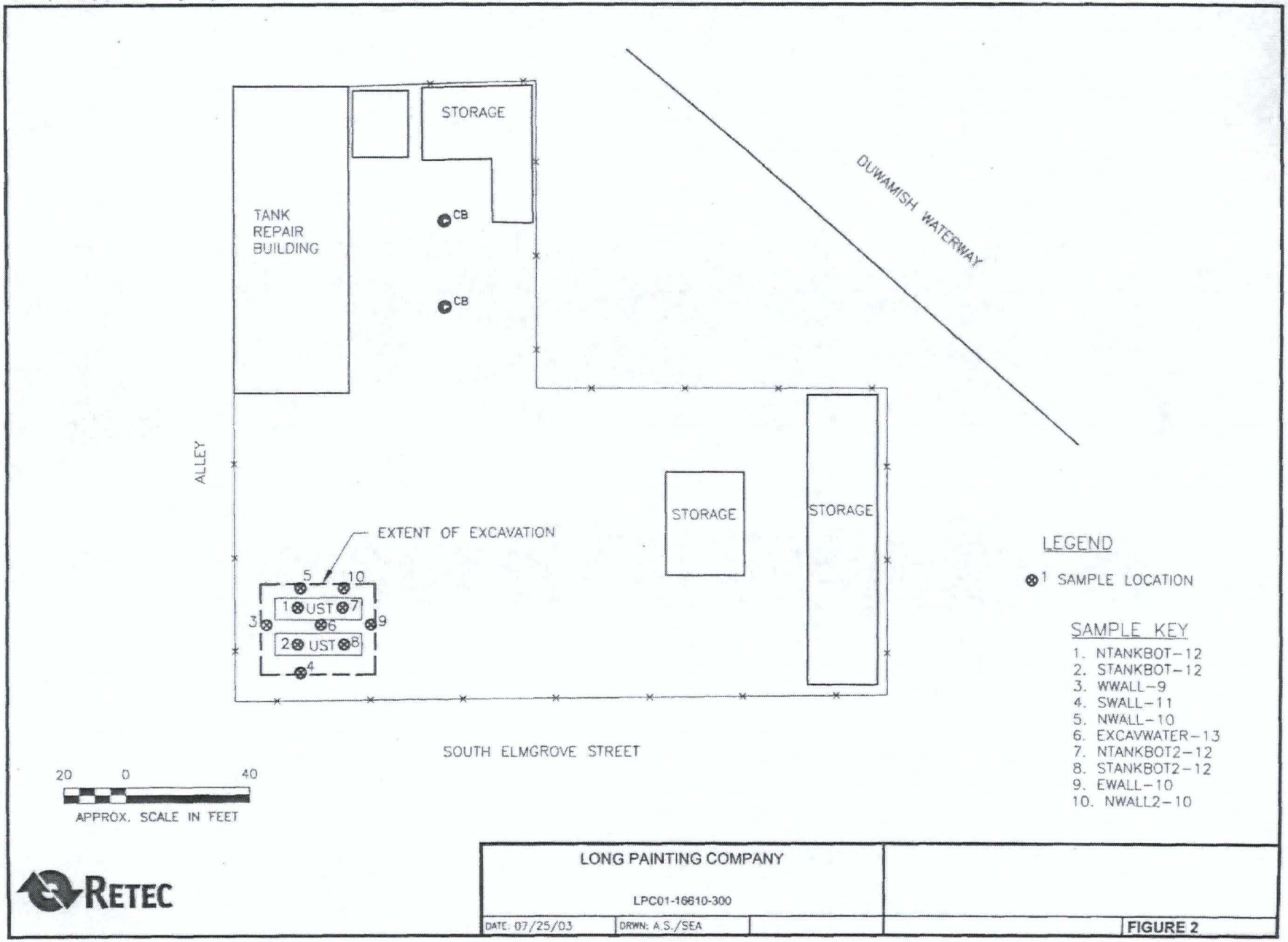
File: H:\16610\166105002.dwg Layout: ANSI_A(-CP User: astenberg Plotted: Jul 28, 2003 - 9:25am Xref's:



RETEC

LONG PAINTING COMPANY			VICINITY MAP
LPC01-16610-300			
DATE: 07/25/03	DRWN: A.S./SEA		FIGURE 1

File: H:\16610\16610S001.dwg Layout: ANSI_A1-CP User: astenberg Plotted: Jul 25, 2003 - 9:08am Xref's:



RETEC

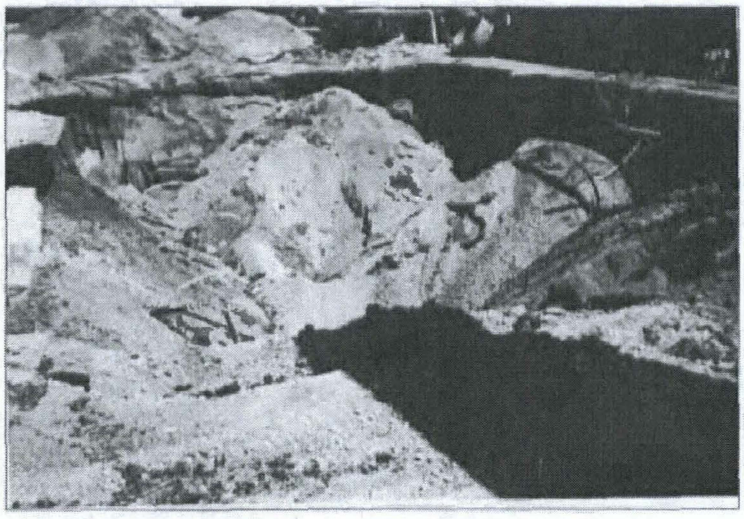
LONG PAINTING COMPANY			
LPC01-16610-300			
DATE: 07/25/03	DRWN: A.S./SEA		FIGURE 2

Attachment 1

Site Photographs

UST Excavation, View NW

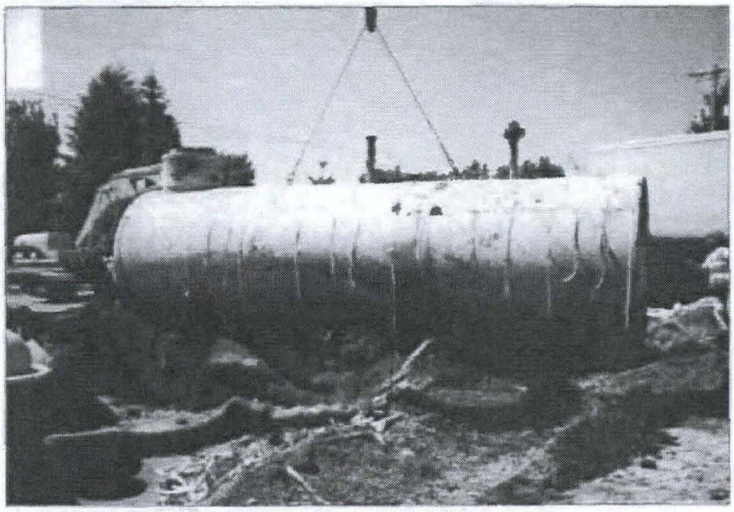
UST Excavation, View E



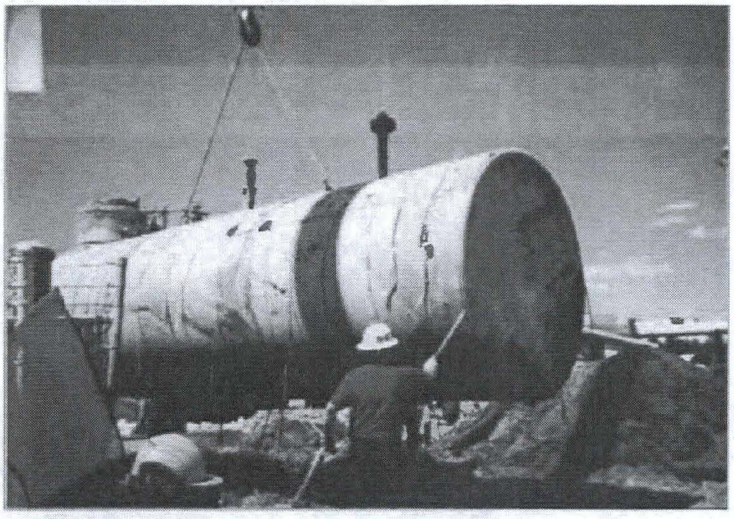
UST Excavation, View SE

Gas Tank Pull, View NW

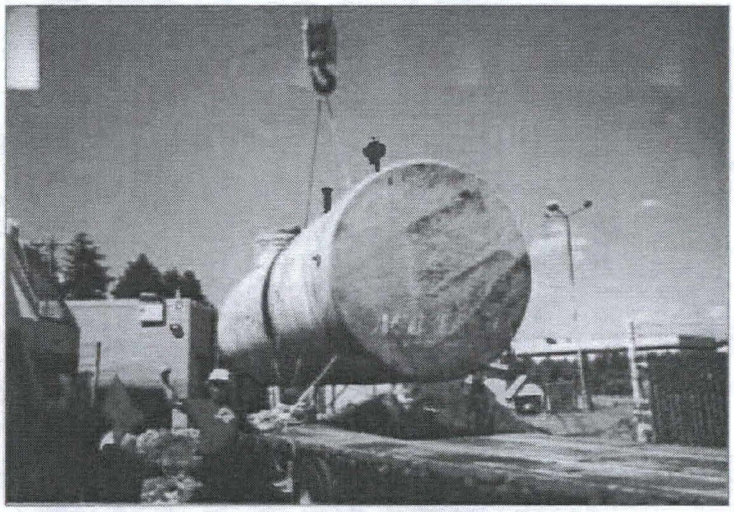
Pulling Gas Tank, View NW



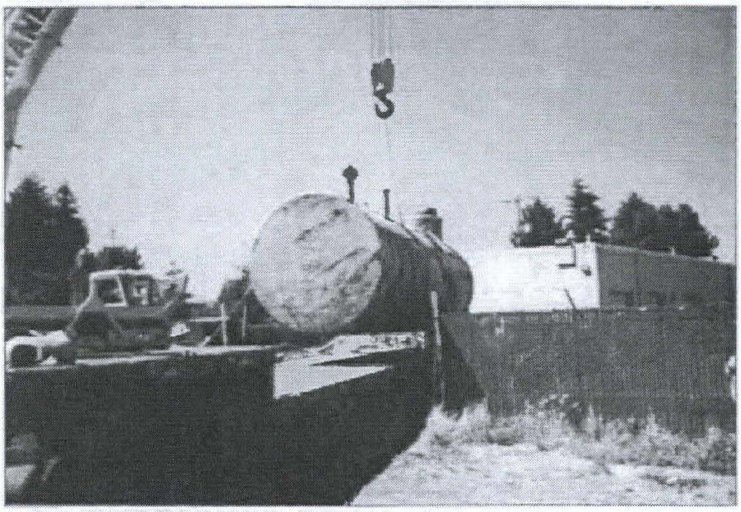
Gas Tank, View NW



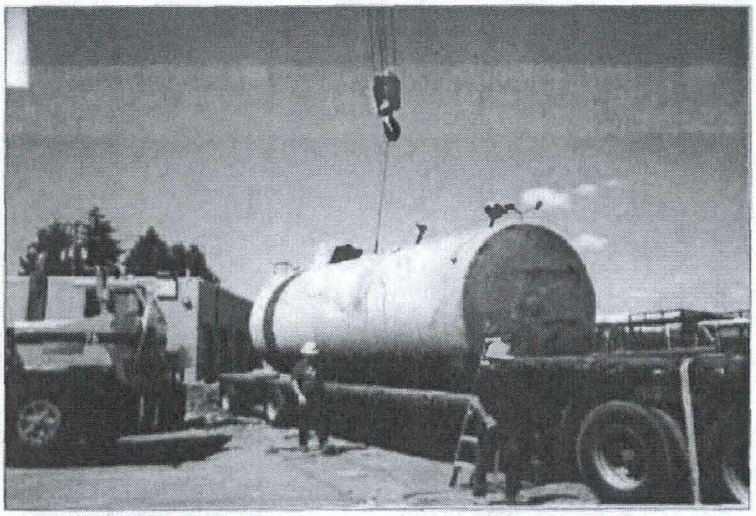
Gas Tank, View N



Gas Tank, View N

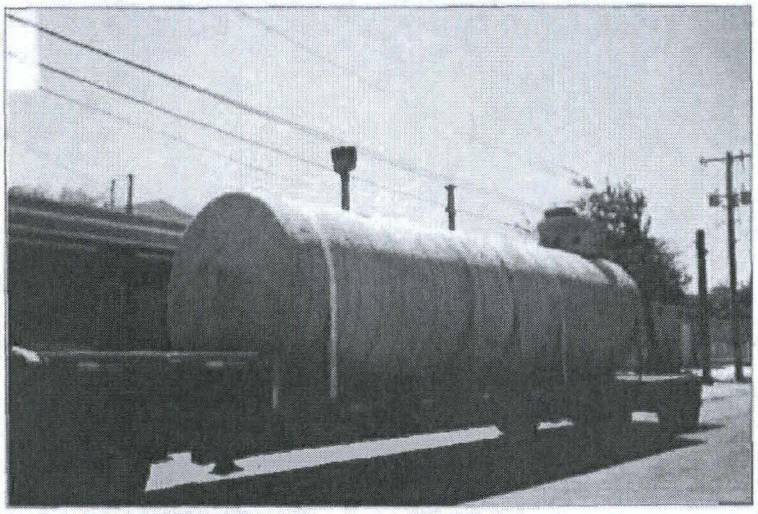


Gas Tank, View NW

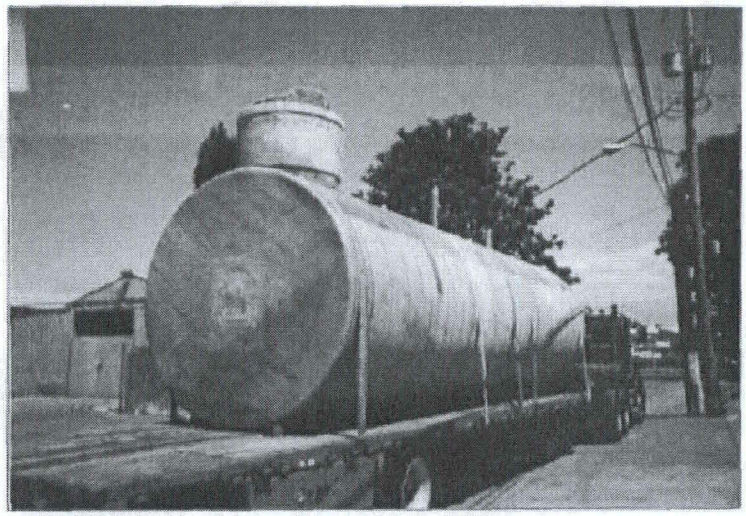


Gas Tank, View N

Gas Tank, View NW



DSL Tank, View SW



DSL Tank, View NE

Attachment 2

Site Check / Site Assessment Checklist

UNDERGROUND STORAGE TANK
Site Check/Site Assessment Checklist

For Office Use Only	
Owner #	
Site #	

INSTRUCTIONS:

When a release has **not** been confirmed and reported, this Site Check/Site Assessment Checklist must be completed and signed by a person registered with Ecology. **The results of the site check or site assessment must be included with this checklist.** This form must be submitted to Ecology at the address shown below within 30 days after completion of the site check/site assessment.

SITE INFORMATION: Include the Ecology site ID number if the tanks are registered with Ecology. This number may be found on the tank owner's invoice or tank permit.

TANK INFORMATION: Please list all tanks for which the site check or site assessment is being conducted. Use the owner's tank ID numbers if available, and indicate tank capacity and substance stored.

REASON FOR CONDUCTING SITE CHECK/SITE ASSESSMENT: Please check the appropriate item.

CHECKLIST: Please initial each item in the appropriate box.

SITE ASSESSOR INFORMATION: This form must be signed by the registered site assessor who is responsible for conducting the site check/site assessment.

Underground Storage Tank Section
Department of Ecology
P. O. Box 47655
Olympia, WA 98504-7655

SITE INFORMATION

Site ID Number (on invoice or available from Ecology if the tanks are registered): 5585

Site/Business Name: Long Painting Company

Site Address: 1022 South Elmgrove Street (Street) Telephone: ( ) _____

Seattle (City) WA (State) 98108 (ZIP Code)

TANK INFORMATION

Tank ID No.	Tank Capacity	Substance Stored
3	10,000	Unleaded gasoline
4	10,000	Diesel

REASON FOR CONDUCTING SITE CHECK/SITE ASSESSMENT

Check one:

- ____ Investigate suspected release due to on-site environmental contamination
- ____ Investigate suspected release due to off-site environmental contamination.
- ____ Extend temporary closure of UST system for more than 12 months.
- ____ UST system undergoing change-in-service.
- ____ UST system permanently closed-in-place.
- X UST system permanently closed with tank removed.
- ____ Abandoned tank containing product.
- ____ Required by Ecology or delegated agency for UST system closed before 12/22/88.
- ____ Other (describe): _____

Attachment 3

Laboratory Analytical Reports

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
BETX by Method SW8021BMod
WTPHg by GC/FID
Page 1 of 1

Sample ID: WWALL-9
SAMPLE

Lab Sample ID: FP26C
LIMS ID: 03-8180
Matrix: Soil
Data Release Authorized:
Reported: 06/27/03

QC Report No: FP26-The Retec Group
Project: LONG POINT UST's
LPCO1-16610-100
Date Sampled: 06/24/03
Date Received: 06/24/03

Date Analyzed: 06/26/03 13:17
Instrument/Analyst: PID1/JC

Purge Volume: 5.0 mL
Sample Amount: 0.092 g-dry-wt
Percent Moisture: 12.0%

CAS Number	Analyte	Result	
71-43-2	Benzene	27 U	
108-88-3	**Toluene**	**67**	
100-41-4	Ethylbenzene	27 U	
	m,p-Xylene	**72**	
95-47-6	**o-Xylene**	**28**	
	Gasoline Range Hydrocarbons	5.5 U	GAS ID ---

BETX Surrogate Recovery

Trifluorotoluene	82.9%
Bromobenzene	85.0%

Gasoline Surrogate Recovery

Trifluorotoluene	81.0%
Bromobenzene	81.0%

BETX Values reported in ppb (µg/kg).
Gasoline Values reported in ppm (mg/kg).

GAS: Indicates the presence of gasoline or weathered gasoline.

GRO: Positive result that does not match an identifiable gasoline pattern.

Quantitation on total peaks in the gasoline range from Toluene to C12.

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
BETX by Method SW8021BMod
WTPHg by GC/FID
Page 1 of 1

Sample ID: NWALL-10
SAMPLE

Lab Sample ID: FP26E
LIMS ID: 03-8182
Matrix: Soil
Data Release Authorized:
Reported: 06/27/03

QC Report No: FP26-The Retec Group
Project: LONG POINT UST's
LPC01-16610-100
Date Sampled: 06/24/03
Date Received: 06/24/03

Date Analyzed: 06/26/03 15:56
Instrument/Analyst: PID1/JC

Purge Volume: 5.0 mL
Sample Amount: 0.094 g-dry-wt
Percent Moisture: 7.7%

CAS Number	Analyte	Result	
71-43-2	Benzene	27 U	
108-88-3	Toluene	27 U	
100-41-4	Ethylbenzene	27 U	
	m,p-Xylene	53 U	
95-47-6	o-Xylene	27 U	
			GAS ID
	Gasoline Range Hydrocarbons	5.3 U	---

BETX Surrogate Recovery

Trifluorotoluene	95.8%
Bromobenzene	94.6%

Gasoline Surrogate Recovery

Trifluorotoluene	92.5%
Bromobenzene	90.2%

BETX Values reported in ppb (µg/kg).
Gasoline Values reported in ppm (mg/kg).

GAS: Indicates the presence of gasoline or weathered gasoline.

GRO: Positive result that does not match an identifiable gasoline pattern.

Quantitation on total peaks in the gasoline range from Toluene to C12.

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
BETX by Method SW8021BMod
WTPHg by GC/FID
Page 1 of 1

Sample ID: EWALL-10
SAMPLE

Lab Sample ID: FP26H
LIMS ID: 03-8185
Matrix: Soil
Data Release Authorized:
Reported: 06/27/03

QC Report No: FP26-The Retec Group
Project: LONG POINT UST's
LPCO1-16610-100
Date Sampled: 06/24/03
Date Received: 06/24/03

Date Analyzed: 06/26/03 16:24
Instrument/Analyst: PID1/JC

Purge Volume: 5.0 mL
Sample Amount: 0.096 g-dry-wt
Percent Moisture: 7.2%

CAS Number	Analyte	Result
71-43-2	Benzene	26 U
108-88-3	Toluene	26 U
100-41-4	Ethylbenzene	26 U
	m,p-Xylene	52 U
95-47-6	o-Xylene	26 U

	Result	GAS ID
Gasoline Range Hydrocarbons	5.2 U	---

BETX Surrogate Recovery

Trifluorotoluene	98.5%
Bromobenzene	99.9%

Gasoline Surrogate Recovery

Trifluorotoluene	97.1%
Bromobenzene	94.6%

BETX Values reported in ppb (µg/kg).
Gasoline Values reported in ppm (mg/kg).

GAS: Indicates the presence of gasoline or weathered gasoline.

GRO: Positive result that does not match an identifiable gasoline pattern.

Quantitation on total peaks in the gasoline range from Toluene to C12.

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
BETX by Method SW8021BMod
WTPHg by GC/FID
Page 1 of 1

Sample ID: NWALL2-10
SAMPLE

Lab Sample ID: FP26I
LIMS ID: 03-8186
Matrix: Soil
Data Release Authorized:
Reported: 06/27/03

QC Report No: FP26-The Retec Group
Project: LONG POINT UST's
LPCO1-16610-100
Date Sampled: 06/24/03
Date Received: 06/24/03

Date Analyzed: 06/26/03 16:52
Instrument/Analyst: PID1/JC

Purge Volume: 5.0 mL
Sample Amount: 0.10 g-dry-wt
Percent Moisture: 7.8%

CAS Number	Analyte	Result	
71-43-2	Benzene	25 U	
108-88-3	Toluene	25 U	
100-41-4	Ethylbenzene	25 U	
	m,p-Xylene	50 U	
95-47-6	o-Xylene	25 U	
	Gasoline Range Hydrocarbons	5.0 U	GAS ID ---

BETX Surrogate Recovery

Trifluorotoluene	92.8%
Bromobenzene	97.5%

Gasoline Surrogate Recovery

Trifluorotoluene	88.6%
Bromobenzene	94.2%

BETX Values reported in ppb (µg/kg).
Gasoline Values reported in ppm (mg/kg).

GAS: Indicates the presence of gasoline or weathered gasoline.

GRO: Positive result that does not match an identifiable gasoline pattern.

Quantitation on total peaks in the gasoline range from Toluene to C12.

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
BETX by Method SW8021BMod
NWTPHg by GC/FID
Page 1 of 1

Sample ID: NTANKBOT-1,2
SAMPLE

Lab Sample ID: FP26N
LIMS ID: 03-8262
Matrix: Soil
Data Release Authorized: [signature]
Reported: 06/27/03

QC Report No: FP26-The Retec Group
Project: LONG POINT USTs
LPC01-16610-100
Date Sampled: 06/24/03
Date Received: 06/24/03

Date Analyzed: 06/26/03 17:20
Instrument/Analyst: PID1/JC

Purge Volume: 5.0 mL
Sample Amount: 0.081 g-dry-wt
Percent Moisture: 21.3%

CAS Number	Analyte	Result	
71-43-2	Benzene	31 U	
108-88-3	Toluene	31 U	
100-41-4	Ethylbenzene	31 U	
	m,p-Xylene	62 U	
95-47-6	o-Xylene	31 U	
	Gasoline Range Hydrocarbons	6.2 U	GAS ID ---

BETX Surrogate Recovery

Trifluorotoluene	73.8%
Bromobenzene	78.6%

Gasoline Surrogate Recovery

Trifluorotoluene	73.0%
Bromobenzene	75.3%

BETX Values reported in ppb (µg/kg).
Gasoline Values reported in ppm (mg/kg).

GAS: Indicates the presence of gasoline or weathered gasoline.

GRO: Positive result that does not match an identifiable gasoline pattern.

Quantitation on total peaks in the gasoline range from Toluene to Naphthalene.

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
BETX by Method SW8021BMod
NWTPHg by GC/FID
Page 1 of 1

Sample ID: SS-1,2,3
SAMPLE

Lab Sample ID: FP26P
LIMS ID: 03-8264
Matrix: Soil
Data Release Authorized:
Reported: 06/27/03

QC Report No: FP26-The Retec Group
Project: LONG POINT USTs
LPC01-16610-100
Date Sampled: 06/24/03
Date Received: 06/24/03

Date Analyzed: 06/27/03 10:51
Instrument/Analyst: RID1/JC

Purge Volume: 5.0 mL
Sample Amount: 0.099 g-dry-wt
Percent Moisture: 5.5%

CAS Number	Analyte	Result	
71-43-2	Benzene	25 U	
108-88-3	Toluene	25 U	
100-41-4	Ethylbenzene	25 U	
	m,p-Xylene	50 U	
95-47-6	o-Xylene	25 U	
	Gasoline Range Hydrocarbons	5.0 U	GAS ID ---

BETX Surrogate Recovery

Trifluorotoluene	100%
Bromobenzene	106%

Gasoline Surrogate Recovery

Trifluorotoluene	92.0%
Bromobenzene	101%

BETX Values reported in ppb (µg/kg).
Gasoline Values reported in ppm (mg/kg).

GAS: Indicates the presence of gasoline or weathered gasoline.

GRO: Positive result that does not match an identifiable gasoline pattern.

Quantitation on total peaks in the gasoline range from Toluene to Naphthalene.

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
BETX by Method SW8021BMod

Lab Sample ID: FP26C
LIMS ID: 03-8180
Matrix: Soil

Sample No: WWALL-9
QC Report No: FP26-The Retec Group
Project: LONG POINT UST's
LPCO1-16610-100
Date Received: 06/24/03

Data Release Authorized:
Reported: 06/27/03

MATRIX SPIKE/SPIKE DUPLICATE RECOVERY

Date Analyzed: 06/26/03

CONSTITUENT	SAMPLE VALUE	SPIKE FOUND	SPIKE ADDED	% RECOVERY	RPD
MATRIX SPIKE					
Benzene	< 27.0	1200	1380	87.0%	
Toluene	67.2	1140	1320	81.3%	
Ethylbenzene	< 27.0	1130	1320	85.6%	
m,p-Xylene	72.1	2080	2760	72.7%	
o-Xylene	28.4	1080	1320	79.7%	
MATRIX SPIKE DUPLICATE					
Benzene	< 27.0	1200	1350	88.9%	0.0%
Toluene	67.2	1060	1300	76.4%	7.3%
Ethylbenzene	< 27.0	1110	1300	85.4%	1.8%
m,p-Xylene	72.1	2060	2710	73.4%	1.0%
o-Xylene	28.4	1090	1300	81.7%	0.9%

BETX SURROGATE RECOVERIES	MATRIX SPIKE	MATRIX SPIKE DUPLICATE
Trifluorotoluene	89.5%	88.5%
Bromobenzene	87.4%	92.8%

Reported in Total ug/kg Dry Weight (ppb)
RPD calculated using sample concentrations per SW846.

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
BETX by Method SW8021BMod
WTPHg by GC/FID
Page 1 of 1

Sample ID: MB-062603
METHOD BLANK

Lab Sample ID: MB-062603
LIMS ID: 03-8180
Matrix: Soil
Data Release Authorized:
Reported: 06/27/03

QC Report No: FP26-The Retec Group
Project: LONG POINT UST's
LPCO1-16610-100
Date Sampled: NA
Date Received: NA

Date Analyzed: 06/26/03 11:52
Instrument/Analyst: PID1/JC

Purge Volume: 5.0 mL
Sample Amount: 0.10 g
Percent Moisture: NA

CAS Number	Analyte	Result	GAS ID
71-43-2	Benzene	25 U	
108-88-3	Toluene	25 U	
100-41-4	Ethylbenzene	25 U	
	m,p-Xylene	50 U	
95-47-6	o-Xylene	25 U	
	Gasoline Range Hydrocarbons	5.0 U	---

BETX Surrogate Recovery	
Trifluorotoluene	111%
Bromobenzene	109%

Gasoline Surrogate Recovery	
Trifluorotoluene	104%
Bromobenzene	104%

BETX Values reported in ppb (µg/kg).
Gasoline Values reported in ppm (mg/kg).

GAS: Indicates the presence of gasoline or weathered gasoline.

GRO: Positive result that does not match an identifiable gasoline pattern.

Quantitation on total peaks in the gasoline range from Toluene to C12.

FORM I

ANALYTICAL RESOURCES INCORPORATED

TOTAL GASOLINE RANGE HYDROCARBONS
NWTPHg - Toluene to Naphthalene

Lab Sample ID: 062603LCS
LIMS ID: 03-8180
Matrix: Soil

QC Report No: FP26-The Retec Group
Project: LONG POINT UST's
LPCO1-16610-100

Data Release Authorized:
Reported: 06/27/03

LABORATORY CONTROL SAMPLE RECOVERY REPORT
Analyzed 06/26/03

CONSTITUENT	SPIKE FOUND	SPIKE ADDED	% RECOVERY	RPD
LABORATORY CONTROL				
Gasoline Range Hydrocarbons	185	125	148%	
LABORATORY CONTROL DUPLICATE				
Gasoline Range Hydrocarbons	140	125	112%	27.7%

TPHg Surrogate Recovery

	LCS	LCSD
Trifluorotoluene	111%	98.5%
Bromobenzene	107%	93.4%

Values reported in parts per million (mg/kg)

TPHg SPIKE CONTROL LIMITS

Percent Recovery 61.0-122%

Advisory QA Limits

FORM-III

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
BETX by Method SW8021BMod **Sample ID: MB-062703**
WTPHg Range Toluene to C12 by GC/FID **METHOD BLANK**
Page 1 of 1

Lab Sample ID: MB-062703
LIMS ID: 03-8190
Matrix: Water
Data Release Authorized:
Reported: 06/30/03

QC Report No: FP26-The Retec Group
Project: Long Painting Co. USTs
LPC01-16610-100
Date Sampled: NA
Date Received: NA

Date Analyzed: 06/27/03 14:26
Instrument/Analyst: PID1/JC

Purge Volume: 5.0 mL
Dilution Factor: 1.00

CAS Number	Analyte	Result	GAS ID
71-43-2	Benzene	1.0 U	
108-88-3	Toluene	1.0 U	
100-41-4	Ethylbenzene	1.0 U	
	m,p-Xylene	1.0 U	
95-47-6	o-Xylene	1.0 U	
1634-04-4	Methyl tert-Butyl Ether	1.0 U	
	Gasoline Range Hydrocarbons	0.25 U	---

BETX Surrogate Recovery

Trifluorotoluene	110%
Bromobenzene	110%

Gasoline Surrogate Recovery

Trifluorotoluene	99.0%
Bromobenzene	106%

BETX Values reported in ppb (µg/L).
Gasoline Values reported in ppm (mg/L).

GAS: Indicates the presence of gasoline or weathered gasoline.

GRO: Positive result that does not match an identifiable gasoline pattern.

Quantitation on total peaks in the gasoline range from Toluene to C12.

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
BETX by Method SW8021BMod
WTPHg Range Toluene to C12 by GC/FID
Page 1 of 1

Sample ID: EXCAVWATER-13
SAMPLE

Lab Sample ID: FP26M
LIMS ID: 03-8190
Matrix: Water
Data Release Authorized:
Reported: 06/30/03

QC Report No: FP26-The Retec Group
Project: Long Painting Co. USTs
LPC01-16610-100
Date Sampled: 06/24/03
Date Received: 06/24/03

Date Analyzed: 06/27/03 12:44
Instrument/Analyst: PID1/MDB

Purge Volume: 5.0 mL
Dilution Factor: 20.0

CAS Number	Analyte	Result	
71-43-2	Benzene	370	
108-88-3	Toluene	770	
100-41-4	Ethylbenzene	77	
	m,p-Xylene	270	
95-47-6	o-Xylene	120	
1634-04-4	Methyl tert-Butyl Ether	59	
	Gasoline Range Hydrocarbons	7.0	GAS ID GAS

BETX Surrogate Recovery

Trifluorotoluene	113%
Bromobenzene	111%

Gasoline Surrogate Recovery

Trifluorotoluene	101%
Bromobenzene	106%

BETX Values reported in ppb (µg/L).
Gasoline Values reported in ppm (mg/L).

GAS: Indicates the presence of gasoline or weathered gasoline.

GRO: Positive result that does not match an identifiable gasoline pattern.

Quantitation on total peaks in the gasoline range from Toluene to C12.

FORM I

ANALYTICAL RESOURCES INCORPORATED

INORGANICS ANALYSIS DATA SHEET
TOTAL METALS
Page 1 of 1

Sample ID: METHOD BLANK

Lab Sample ID: FP26MB
LIMS ID: 03-8190
Matrix: Water
Data Release Authorized:
Reported: 07/03/03

QC Report No: FP26-The Retec Group
Project: Long Painting Co. USTs
LPC01-16610-100
Date Sampled: NA
Date Received: NA

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	RL	mg/L	Q
3010A	07/01/03	6010B	07/02/03	7439-92-1	Lead	0.02	0.02	U

U-Analyte undetected at given RL
RL-Reporting Limit

FORM-I

ANALYTICAL RESOURCES INCORPORATED

INORGANICS ANALYSIS DATA SHEET
TOTAL METALS
Page 1 of 1

Sample ID: EXCAVWATER-13
SAMPLE

Lab Sample ID: FP26M
LIMS ID: 03-8190
Matrix: Water
Data Release Authorized:
Reported: 07/03/03

QC Report No: FP26-The Retec Group
Project: Long Painting Co. USTs
LPC01-16610-100
Date Sampled: 06/24/03
Date Received: 06/24/03

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	RL	mg/L	Q
3010A	07/01/03	6010B	07/02/03	7439-92-1	Lead	0.1	5.5	

U-Analyte undetected at given RL
RL-Reporting Limit

ANALYTICAL RESOURCES INCORPORATED

INORGANICS ANALYSIS DATA SHEET
TOTAL METALS

Sample ID: LAB CONTROL

Lab Sample ID: FP26LCS
LIMS ID: 03-8190
Matrix: Water
Data Release Authorized:
Reported: 07/03/03

QC Report No: FP26-The Retec Group
Project: Long Painting Co. USTs
LPC01-16610-100
Date Sampled: NA
Date Received: NA

BLANK SPIKE QUALITY CONTROL REPORT

Analyte	Analysis Method	Spike Found	Spike Added	% Recovery	Q
Lead	6010B	1.93	2.00	96.5%	

Reported in mg/L

N-Control limit not met
Control Limits: 80-120%